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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/697,213

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Eduardo Jimenez

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EXAMINER

GUIDOTTI, LAURA COLE

ART UNIT

PAPER NUMBER

1744

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/697,213

Applicant(s)

JIMENEZ ET AL.

Examiner

Laura C. Guidotti

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 45,47-49,77 and 79-87 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 45,47-49,77 and 79-87 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 45, 47-49, 77, 79-87 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In both Claim 45 Lines 14-15 and Claim 85 Lines 11-12, it is unclear to the Examiner what is meant by "...at least one of said plurality of third cleaning elements (or elastomeric wipers) is *spaced from the second surface in a direction of the first surface by the opening.*" It is confusing as to how the first surface has a direction and it is particularly confusing how the first surface would be in a direction of the first surface by the opening.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

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under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 45, 47-48, 77, and 79-84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Urbush, USPN 3,316,576 in view of Volpenhein, USPN 5,839,148.

Urbush discloses a toothbrush comprising a handle (12), a head (18; the head is a conventional toothbrush) connected to the handle by a neck element (14), and a mechanical vibratory device (portions 40, 41, 42, 43) that causes the head to vibrate (via 21; Column 2 Lines 33-39). Regarding claim 77, the mechanical vibratory device is located in the region adjacent to the head (see Figures) and is operatively connected to an electric power source (Column 1 Lines 9-11; Column 2 Lines 38-39). Urbush utilizes as its head a conventional toothbrush (Column 1 Lines 48-49) and the device is capable of using various sizes and types of conventional toothbrushes in the vibratory portion (Column 1 Lines 13-20). Urbush does not include a head comprising movable elements.

Volpenhein discloses the claimed invention including a head (10) having a first surface (lowermost surface facing downward in Figure 1) and a second surface (uppermost surface facing upward in Figure 1), a first cleaning element extending from the first surface that is non-movable relative to the head (one of the tufts "18" farthest from the handle 30), a second cleaning element extending from the first surface that is non-movable relative to the head (another one of the tufts "18" nearest to the handle

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30), a plurality of third cleaning elements disposed between the first and second cleaning elements (14) and being movable relative to the head (see arrow in Figure 1; Column 2 Lines 11-15), and a discontinuity in the form of an opening in the head directly opposite at least one of the plurality of third cleaning elements (the opening is unlabeled but shown in Figure 2) when the third cleaning elements are in a static non-moving condition (the third cleaning elements 14 are capable of being non-moving in any of the positions about pin 24 limited by stop 28) to allow for movement of the at least one of the plurality of third cleaning elements relative to the head (the opening is unlabeled but shown in Figure 2 as being within the brush head where 12 rocks), wherein at least one of the plurality of third cleaning elements (any one of 14) is spaced from a plane of the second surface in a direction of the first surface by the opening (wherein the tufts 14 are spaced in a direction of the first upper surface by the opening, particularly when the portion 12 travels or rocks). The toothbrush is designed for providing control and cleaning ability of fixed tufts while also providing for the cleaning effectiveness of the movable tufts that follows the contour of the teeth (Abstract). Regarding claim 47, there is at least one additional cleaning element included in an area between the first or second and third cleaning elements (other rows of bristle tufts 18, see Figures). Regarding claim 48, the third cleaning elements comprise movable wipers (the third cleaning elements 14 are tufts of bristles which act as wipers). Regarding claim 79, the discontinuity is on the second surface opposite at least one of the plurality of third cleaning elements (see Figure 2). Regarding claims 80-81, at least one of the plurality of third cleaning elements is movable toward at least one of and each of the first and

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second cleaning elements (as the third cleaning elements "rock" they move towards one of the first or second cleaning elements and are capable of being movable toward each of the first and second cleaning elements; see directional arrow in Figure 1). Regarding claims 82-84, there is a fourth cleaning element disposed between the first cleaning element and at least one of the plurality of third cleaning elements (the fourth cleaning element is one of the inner tufts 18 between the first cleaning element and the third cleaning elements, see Figures 1-2), at least one of the plurality of third cleaning elements is movable toward at least one of and each of the first and fourth cleaning elements (see Figures 1-2).

It would have been obvious for one of ordinary skill in the art at the time the invention was made to substitute the conventional toothbrush head of Urbush for one having a movable cleaning elements and first and second non-movable cleaning elements, as Volpenhein teaches, so that the toothbrush can resiliently conform to the inner mouth and tooth surfaces of which the toothbrush is cleaning to better aid in the cleaning of teeth and the oral cavity.

3. Claims 85-87 are rejected under 35 U.S.C. 103(a) as being unpatentable over Urbush, USPN 3,316,576 in view of Volpenhein, USPN 5,839,148 and Flewitt, USPN 5,896,614.

Urbush discloses all elements above, however does not include a head comprising a plurality of movable elastomeric wipers disposed between first and second cleaning elements that are non-movable relative to the head.

Volpenhein discloses all elements above, including the teaching of a head (10) comprising a plurality of movable cleaning elements (14) disposed between first and second cleaning elements (leftmost and rightmost tufts 18 as shown in the Figures) that are non-movable relative to the head. Regarding claims 86-87, the first and second cleaning elements extend from a first surface of the head (the first surface is shown downwards in the Figures) and the discontinuity (the opening in the head 10) is present and visible with reference to the second surface (the surface facing upwards in the Figures) of the head opposite the first (as shown in Figures 1-2). Volpenhein does not disclose that the plurality of movable cleaning elements is elastomeric wipers.

Flewitt teaches a bristle arrangement for a toothbrush wherein there are both cleaning elements of tufts of bristles (14, 15) and a plurality of elastomeric wipers (12 or 13; Column 3 Lines 40-42) disposed between groups of tufts of bristles (Figure 7). These elastomeric wiper cleaning elements are provided to improve the cleaning efficiency in brushing teeth and also are advantageous as they are unlikely to retain moisture that could lead to the growth of bacteria (Column 3 Line 63 to Column 4 Line 5).

It would have been obvious for one of ordinary skill in the art to substitute the conventional toothbrush head of Urbush for one having a movable cleaning elements and first and second non-movable cleaning elements, as Volpenhein teaches, so that the toothbrush can resiliently conform to the inner mouth and tooth surfaces of which the toothbrush is cleaning to better aid in the cleaning of teeth and the oral cavity, and further it would have been obvious for one of ordinary skill in the art to substitute the

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third cleaning elements of Urbush and Volpenhein for elastomeric wipers, as Flewitt teaches, in order to improve the cleaning efficiency and efficacy of a toothbrush and to inhibit possible bacteria growth on a toothbrush.

4. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Urbush, USPN 3,316,576 in view of Volpenhein, USPN 5,839,148 as applied to claim 48 in view of Halm, US 5,813,079 (herein referred to as Halm '079) and in further view of Halm, US 5,951,158 (herein referred to as Halm '158).

Urbush and Volpenhein disclose all elements mentioned above, however do not disclose that the movable wipers are mounted on a resilient membrane and rotate towards one another upon application of sufficient force on the toothbrush and away from each other upon release of that force. Volpenhein, however, does state "rocking portion 12 may be movable attached to stationary portion 16 by traditional hinges, pins, living hinges, or the like" (Column 2 Lines 48-50).

Halm '079 teaches a toothbrush with a center rigid rocking portion (13, 23, 33) that is movably attached to a stationary head frame (12, 22, 32) and the head having first and second cleaning elements extending from a first surface that is non-movable relative to the head (cleaning elements that wipe 27, Figure 2A) and third cleaning elements that are considered wipers and are movable relative to the head (14, 24, 34), wherein all of the third cleaning elements that are wipers are mounted on a resilient membrane in order to provide a rocking motion (16, 26; Column 2 Line 58 to Column 3 Line 9, Column 4 Lines 59-67, Column 5 Lines 7-17).

Halm '158 teaches third cleaning elements or wipers of a central section (46; Figure 4B) mounted on linked carriers (44, 45) to a frame (42) having first and second cleaning elements extending from a first surface that is non-movable relative to the head (see Attachment A that was included in the Office Action of 19 October 2005), wherein the third cleaning elements that are wipers are mounted and linked on a resilient membrane (49) and towards one another upon application of sufficient force on the toothbrush and away from each other upon release of that force in order to assist toward a gentle tooth cleaning action (Figure 4D; Column 5 Lines 27-32).

It would have been obvious for one of ordinary skill in the art to modify the brush head of Urbush and Volpenhein so that the rocking brush carrier having the wipers are mounted on a resilient membrane, as Halm '079 teaches, in order to provide a material that allows sufficient rocking motion to third cleaning elements or wipers, and further it would have been obvious to modify the brush head of Urbush, Volpenhein, and Halm '079 to further include that the wipers are mounted on a resilient membrane in such away so that the wipers rotate towards one another upon application of sufficient force on the toothbrush and away from each other upon release of that force, as Halm '158 teaches, so that the third elements can be capable of conforming to a tooth surface and assist towards gentle tooth cleaning practice.

Response to Arguments

5. Applicant's arguments filed 27 November 2006 have been fully considered but they are not persuasive.

On Page 6 of the Remarks, the Applicant contends that the cleaning elements 14 of Urbush (it is believed that the Applicant is referring to cleaning elements 14 of Volpenhein, not Urbush) are not directly opposite the opening when they are in a static non-moving condition. However, the Examiner respectfully disagrees. The cleaning elements 14 of Volpenhein are capable of being in a static non-moving condition at many positions as they are mounted on rocking portion 12 and rock about pin 24. There are fixed stops 28 to limit the travel of portion 12 (Column 2 Lines 25-32). The cleaning elements 14 may be in a static non-moving condition when the rocking portion 12 when it reaches a stop. In this location about half of 12 containing cleaning elements 14 would be positioned directly opposite a portion of the opening (see Figures).


Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura C. Guidotti whose telephone number is (571) 272-1272. The examiner can normally be reached on Monday-Thursday, 7:30am - 5pm, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on (571) 272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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